

31. The method of claim 30, wherein said collecting includes collecting the information from one or more distributed databases.
32. The method of claim 31, wherein the information stored in the one or more distributed databases does not include raw transaction data.
33. The method of claim 31, wherein the information stored in the one or more distributed databases includes profile data.
- 10 34. The method of claim 33, wherein the profile data stored in one of the distributed databases is based on television viewing data.
- 15 35. The method of claim 33, wherein the profile data stored in one of the distributed databases is based on Internet surfing data.
- 20 36. The method of claim 33, wherein the profile data stored in one of the distributed databases is based on purchase transaction data.
37. The method of claim 30, wherein said processing includes processing the information to generate the subscriber characterization vector in the form of a ket vector.
38. The method of claim 37, wherein the ket vector is represented by:

$$|A\rangle = (a_1\rho_1 + a_2\rho_2 + \dots a_n\rho_n)$$

$$\begin{aligned} & + (b_1\sigma_1 + b_2\sigma_2 + \dots b_n\sigma_n) \\ & + \dots \\ & + (m_1\omega_1 + m_2\omega_2 + \dots m_n\omega_n) \end{aligned}$$

wherein a_1 through m_n represent weighting factors and σ_1 through ω_n are identification factors

5 selected from at least a subset of demographic factors, socio-economic factors, housing factors, purchase factors, and consumption factors.

39. The method of claim 37, wherein said processing further includes normalizing the ket vector with a corresponding bra vector.

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40. The method of claim 30, further comprising comparing an advertisement characterization vector representing an advertisement and the subscriber characterization vector to determine if the subscriber would likely be interested in the advertisement.

15 41. The method of claim 40, wherein said comparing is performed by applying an operator to the subscriber characterization vector.

42. The method of claim 40, wherein said comparing is performed by a secure correlation server.

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43. The method of claim 30, further comprising applying an operator to the subscriber characterization vector in order to group the subscriber with other subscribers based on similar traits.

44. The method of claim 43, wherein the similar traits include demographics.

45. The method of claim 43, wherein the similar traits include geographics.

46. The method of claim 43, wherein the similar traits include product interest.

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47. A method for targeting advertisements in a privacy protected manner to one or more subscribers, the method comprising:

receiving an advertisement profile for a particular advertisement;

retrieving a subscriber profile for a particular subscriber;

10 correlating the advertisement profile and the subscriber profile to determine if the advertisement is likely to be of interest to the subscriber.

48. The method of claim 47, wherein the particular advertisement is a group of advertisements having similar target markets.

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49. The method of claim 47, wherein the particular subscriber is a group of subscribers.

50. The method of claim 49, wherein the group of subscribers are grouped based on geographic or demographic similarities.

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51. The method of claim 47, wherein said retrieving includes retrieving the subscriber profile in the form of a ket vector.

52. The method of claim 51, wherein the ket vector is represented by:

$$5 \quad |A\rangle = (a_1\rho_1 + a_2\rho_2 + \dots a_n\rho_n)$$

$$+ (b_1\sigma_1 + b_2\sigma_2 + \dots b_n\sigma_n)$$

+ ...

$$+ (m_1\omega_1 + m_2\omega_2 + \dots m_n\omega_n)$$

wherein a_1 through m_n represent weighting factors and ρ_1 through ω_n are identification factors

10 selected from at least a subset of demographic factors, socio-economic factors, housing factors, purchase factors, and consumption factors.

and

53. The method of claim 51, wherein said correlating includes applying an operator to the ket vector.

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54. The method of claim 53, wherein the operator may be applied to ket vectors associated with single subscribers or a group of subscribers.

20 55. The method of claim 53, wherein the operator returns a measurable result that can be used to determine the interest of the subscriber to the advertisement.

56. The method of claim 47, wherein said retrieving includes retrieving the subscriber profile from one or more distributed databases.

57. A system for profiling a subscriber by integrating numerous distinct aspects of information about the subscriber, the system comprising:
one or more distributed databases storing information about subscribers; and
a secure correlation server, coupled to the one or more distributed databases, for
5 retrieving the information from the one or more distributed databases, and
generating subscriber characterization vectors based on the retrieved information.

10 58. The system of claim 57, wherein the subscriber characterization vectors are generated in the form of one or more ket vectors.

15 59. The system of claim 58, wherein the ket vectors are in the form of :

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$$\begin{aligned} |A\rangle = & (a_1\rho_1 + a_2\rho_2 + \dots a_n\rho_n) \\ & + (b_1\sigma_1 + b_2\sigma_2 + \dots b_n\sigma_n) \\ & + (c_1\tau_1 + c_2\tau_2 + \dots c_n\tau_n) \\ & + (d_1\nu_1 + d_2\nu_2 + \dots d_n\nu_n) \\ & + (e_1\omega_1 + e_2\omega_2 + \dots e_n\omega_n). \end{aligned}$$

20 60. The system of claim 59, wherein $a_n\rho_n$ represent weighted demographic factors.

61. The system of claim 59, wherein $b_n\sigma_n$ represents weighted socio-economic factors.

25 62. The system of claim 59, wherein $c_n\tau_n$ represents weighted housing factors

63. The system of claim 59, wherein $d_n\nu_n$ represents weighted purchase factors.

64. The system of claim 59, wherein $e_n \omega_n$ represents weighted consumption factors.
65. The system of claim 59, wherein a_1 through e_n represent weighting factors and ρ_1 through ω_n are identification factors selected from at least a subset of demographic factors, socio-economic factors, housing factors, purchase factors, and consumption factors
66. The system of claim 58, wherein said secure correlation server also applies one or more operators to the one or more ket vector to obtain an observable result.
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67. The system of claim 66, wherein the observable result indicates whether the subscriber is likely to be interested in a particular advertisement.
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68. The system of claim 66, wherein the observable result indicates whether the subscriber has similar traits with a group of subscribers.
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69. The system of claim 67, wherein the secure correlation server also provides the observable result to an advertisement management server for delivering applicable advertisements to appropriate subscribers.
70. A system for delivering targeted advertisements to a subscriber, the system including:
a secure profiling system made up of one or more databases, wherein the one or more databases store profile information about the subscriber;

one or more advertisement sources for providing advertisements and advertisement characterization vectors defining a target audience of the advertisements;

a secure correlation server, coupled to the secure profiling system and the one or more advertisement sources, for

5 receiving an advertisement characterization vector from one of the one or more advertisement sources,

retrieving profile information from the secure profiling system,

generating subscriber characterization vectors based on the retrieved profile information,

10 correlating the subscriber characterization vectors and the subscriber characterization vector, and

aa! selecting appropriate subscribers to receive the advertisement associated with the advertisement characterization vector; and

an access network for delivering the advertisement to the applicable subscribers.

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71. The system of claim 70, wherein the subscriber characterization vectors are in the form of ket vectors.

72. The system of claim 71, wherein the secure correlation server performs the correlating
20 by applying one or more operators to the ket vectors.

73. A secure correlation server for correlating advertisements to subscribers in a privacy protected manner, the secure correlation server including:

means for receiving advertisement characterization vectors;

means for retrieving subscriber characterization vectors from one or more distributed databases; and

means for correlating the advertisement characterization vectors and the subscriber characterization vectors.

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74. The secure correlation server of claim 73, wherein said means for retrieving subscriber characterization vectors includes means for generating ket vectors based on retrieved subscriber characterization vectors.

10 75. The secure correlation server of claim 74, wherein said means for correlating includes means for applying an operator to the ket vectors to determine the correlation between the advertisement characterization vectors and the subscriber characterization vectors.

15 Respectfully submitted,

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